

REMARKS

At the time the present Office Action was mailed (October 27, 2005) claims 1-53 were pending in the application. In this response, claims 1, 14, 21, 26, 34, 40, 44 and 48 have been amended, and claims 13, 24, 33, 39, 42 and 43 have been cancelled. Accordingly, claims 1-12, 14-23, 25-32, 34-38, 40, 41 and 44-53 are currently pending.

In the October 27, 2005, Office Action, all the pending claims were rejected. More specifically, the status of the application in light of this Office Action is as follows:

- (A) The specification was objected to on the basis of informalities;
- (B) Claims 1-3, 5, 7, 9-12, 26, 27, 29-32, 34-38, 40-44, 48-50 and 53 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,049,016 to Nordyke ("Nordyke");
- (C) Claims 6, 13, 33, 39, 45, 46 and 52 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nordyke in view of U.S. Patent No. 6,325,582 to Sadri et al. ("Sadri");
- (D) Claims 4, 14-23, 25, 28, 47 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nordyke in view of U.S. Patent No. 3,464,472 to Reynolds ("Reynolds");
- (E) Claims 18 and 21-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nordyke, Reynolds and Sadri; and
- (F) Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nordyke in view of U.S. Patent No. 4,326,825 to Volkmann et al. ("Volkmann").

The undersigned attorney wishes to thank the Examiner and his supervisor for engaging in a telephone interview on January 10, 2006. During the telephone interview, the pending claims and the applied references were discussed, and the Examiner directed

the undersigned attorney's attention to Figure 2, in addition to Figure 5, of the Nordyke reference. An agreement was not reached during the course of the interview. Upon further review of the applied references, the undersigned attorney provides the foregoing amendments in addition to those discussed during the telephone interview, along with the following remarks.

A. Response to the Specification Objection

The specification was objected to on the basis of informalities. Paragraph [0034] has been amended in this response to correct this informality. Paragraph [0041] has also been amended a typographical error.

B. Response to the Section 102 Rejections

Claim 1 was rejected under Section 102(b) on the basis of Nordyke. Claim 1, as amended, is directed to a method for fastening components that includes inserting an elongated member through a first hole in a first component and a second hole in a second component, with the head of the elongated member positioned at least proximate to the first component. The method further includes passing a collar axially over a helical groove of the elongated member without rotating either the collar or the elongated member prior to swaging the collar. The collar has an outwardly projecting flange and a barrel adjacent to the flange, with the barrel having a generally constant inner diameter and generally constant outer diameter. The method further includes swaging the collar to the helical groove of the elongated member by engaging the generally constant outer diameter of the barrel with an installation tool, and with the first and second components positioned between the head and the collar. The collar is positioned between the second component and a removable portion of the elongated member, and the method further includes removing the removable portion of the elongated member.

During the January 10, 2006 telephone interview, the Examiner and the undersigned attorney discussed incorporating the features of claim 13 into claim 1. Claim

1 has been amended accordingly. The Examiner further pointed out that such an amendment would still appear to read on Nordyke's prior art figure (Figure 2).

Claim 1 has been further amended in light of the Examiner's comment to clarify that the collar that is swaged onto the elongated member has a barrel with a generally constant inner diameter and a generally constant outer diameter, and that the collar is swaged onto the elongated member by engaging the generally constant outer diameter of the barrel with an installation tool. Nordyke's primary disclosure and his prior art figure teach away from this combination of features. For example, Nordyke's prior art figure (Figure 2) includes an outwardly projecting bead 27 that is engaged by an installation tool during a swaging operation. The purpose of the bead appears to be to provide a hold-off or stand-off of the initial swage until a desired preload value is attained (Nordyke, column 1, lines 55-59). Nordyke teaches dispensing with the bead and replacing it with a collar having an outwardly tapering inner diameter and an outwardly tapering outer diameter (see Nordyke's Figures 1, 3, and 6). Nordyke specifically discloses the advantages of such an arrangement as providing "a generally uniform fill of the lock grooves of the associated pin over the swaged area without excessive necking of the pin and hence with minimal distortion of the lock grooves." (Nordyke, column 6, lines 40-47.) Accordingly, Nordyke's disclosure specifically teaches away from a collar having both a generally constant inner diameter and a generally constant outer diameter. Furthermore, Nordyke's characterization of the prior art, which discloses a bead at the end of the collar distal from the flange, fails to anticipate or suggest a collar having "a generally constant outer diameter."

For the foregoing reasons, and for the additional features of the claim, the Section 102 rejection of claim 1 should be withdrawn. Claims 2, 3, 5, 7 and 9-12 all depend from claim 1. Accordingly, the Section 102 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these claims.

Independent claims 26, 34, 40, 44 and 48 have been amended to include features generally similar to those described above with reference to claim 1. Accordingly, the Section 102 rejections of these claims on the basis of Nordyke should be withdrawn for the foregoing reasons and for the additional features of these dependent claims. Claims 27, 29-32, 35-38, 41, 49, 50 and 53 all depend from one of the foregoing independent claims. Accordingly, the Section 102 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these dependent claims. Claims 42 and 43 have been cancelled and accordingly, the Section 102 rejections of these claims are now moot.

C. Response to the Section 103 Rejections on the Basis of Sadri

Claims 6, 13, 33, 39, 45, 46 and 52 were rejected under Section 103 on the basis of Nordyke in view of Sadri. Each of these claims depends from one of the independent claims discussed above. Accordingly, the Section 103 rejections of these claims should be withdrawn for at least the reasons discussed above and because Sadri fails to cure the deficiency described above with reference to Nordyke as an anticipatory reference. In particular, Sadri is directed to addressing the problem of damage to composite parts that can occur as a result of separation loads created when releasing the pintail section of a swagable fastener (Sadri, column 2, lines 2-15). However, Sadri fails to provide any suggestion or motivation for applying a collar to an elongated member or pin having a helical groove. Therefore, the Section 103 rejections of claims 6, 45, 46 and 52 should be withdrawn. Claims 13, 33 and 39 have been cancelled and accordingly, the Section 103 rejections of these claims are now moot.

D. Response to the Section 103 Rejections on the Basis of Reynolds

Claims 4, 14-23, 25, 28, 47 and 51 were rejected under Section 103 on the basis of Nordyke in view of Reynolds. Reynolds was relied on for its disclosure of using a sealant in combination with a swage fastener system. However, Reynolds fails to address the deficiency described above with reference to Nordyke in connection with claim 1.

Accordingly, the Section 103 rejection of claim 4 (which depends from claim 1) should be withdrawn for at least the foregoing reasons and for the additional features of this dependent claim.

Independent claims 14 and 21 have been amended to include the features described above with reference to claim 1. Accordingly, the Section 103 rejections of these claims on the basis of Nordyke and Reynolds should be withdrawn for the foregoing reasons and for the additional features of these independent claims. Claims 15-20 depend from claim 14 and claims 22, 23 and 25 depend from claim 21. Accordingly, the Section 103 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these dependent claims.

Claim 28 depends from claim 26, claim 47 depends from claim 44, and claim 51 depends from claim 48. Accordingly, the Section 103 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these dependent claims.

E. Response to the Section 103 Rejections on the Basis of Nordyke, Sadri and Reynolds

Claims 18 and 21-25 were rejected under 35 U.S.C. § 103(a) on the basis of Nordyke, Reynolds and Sadri. Claim 18 depends from claim 14 and claims 22-25 depend from claim 21. As discussed above, the foregoing references fail to provide the motivation required to combine their disclosed features in a manner that results in the combination of elements included in independent claims 14 and 21. Accordingly, the Section 103 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these claims.

F. Response to the Section 103 Rejection on the Basis of Nordyke and Volkmann

Claim 8 was rejected under Section 103 on the basis of Nordyke and Volkmann. Volkmann was cited as disclosing an elongated member having an interference fit with at

least one of the components through which it passes. However, Volkmann fails to disclose or suggest the features of claim 1 (from which claim 8 depends) including, but not limited to, a collar having a barrel with a generally constant inner and outer diameter, swaged onto a helical groove of an elongated member. Instead, Volkmann's collar has an outer projection generally similar to that disclosed in Nordyke's Figure 2, and a tapering outer diameter (see Volkmann at Figure 1). Accordingly, the Section 103 rejection of claim 8 should be withdrawn.

G. Conclusion

In light of the foregoing amendments and remarks, all of the pending claims are now in condition for allowance. If the Examiner notices any informalities with the claims, or any additional aspects of the cited references as applied to the claims, the Examiner is encouraged to contact the undersigned attorney by telephone at 206-359-3257.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 030048120US from which the undersigned is authorized to draw.

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Respectfully submitted,

By 

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